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7590	11/02/2006		EXAMINER	
Andrew E. Pierce 161 McCracken Drive Seneca, SC 29678			WILKINS III, HARRY D	
			ART UNIT	PAPER NUMBER
			1742	
DATE MAILED: 11/02/2006				

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**BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES**

Application Number: 10/601,602
Filing Date: June 23, 2003
Appellant(s): JACKSON ET AL.

MAILED

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GROUP 1700

Andrew Alexander
For Appellant

EXAMINER'S ANSWER

This is in response to the appeal brief filed 5 September 2006 appealing from the Office action mailed 15 March 2006.

(1) Real Party in Interest

A statement identifying by name the real party in interest is contained in the brief.

(2) Related Appeals and Interferences

The examiner is not aware of any related appeals, interferences, or judicial proceedings which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

(3) Status of Claims

The statement of the status of claims contained in the brief is correct.

(4) Status of Amendments After Final

The appellant's statement of the status of amendments after final rejection contained in the brief is correct.

(5) Summary of Claimed Subject Matter

The summary of claimed subject matter contained in the brief is correct.

(6) Grounds of Rejection to be Reviewed on Appeal

The appellant's statement of the grounds of rejection to be reviewed on appeal is substantially correct. The changes are as follows: "3. Whether claim 34 is unpatentable under 35 U.S.C. 102(b) over Sawamoto et al" and "7. Whether claim 35 is unpatentable under 35 U.S.C. 103 over Sawamoto et al in view of de Nora et al

WITHDRAWN REJECTIONS

The following grounds of rejection are not presented for review on appeal because they have been withdrawn by the examiner. (as denoted in Appellant's "Grounds of Rejection" section) "1", "2", "4", "5" and "6". The art rejections of claims 8-17

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have been withdrawn to concentrate the issues under appeal on the enablement rejection. If it is deemed that Appellant's disclosure is enabling for the claimed "low alkali metal ion transport efficiency", then the disclosures of Kelham and Cohn et al would not be considered to inherently have the claimed "low alkali metal ion transport efficiency" since the polymeric membranes utilized in those cells would not necessarily have the same properties.

(7) Claims Appendix

The copy of the appealed claims contained in the Appendix to the brief is correct.

(8) Evidence Relied Upon

US 5,290,406	Sawamoto et al	03-1994
US 4,381,979	de Nora et al	05-1983

(9) Grounds of Rejection

The following ground(s) of rejection are applicable to the appealed claims:

1. Claims 8-17 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. Applicant has not enabled one of ordinary skill in the art to make a "low" alkali metal ion transport efficiency because no composition has been fully described which meets the limitation, nor has a specific example been provided which meets the limitation. One of ordinary skill in the art, upon reading the specification, would have had no idea how to make a permselective membrane with the claimed low alkali metal

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ion transport efficiency having less than 60% transport efficiency, much less less than 20% transport efficiency.

Further in support of the position, "Recovery of Sodium Hydroxide from Alkaline Waste Solutions", describes various membranes, both polymeric and ceramic, and show that the sodium ion transport efficiency (migration efficiency) depends, not only on the membrane composition, but also the operating conditions in which the membrane is used. This cast further doubts as to how to make the invention as claimed. Can the invention be practiced with a membrane, which normally exhibits high transport efficiency, in such a way that the membranes inherent transport efficiency is lowered to be considered "low"?

Since the only disclosure of a composition of the membrane (see the first paragraph of page 14) merely states that a copolymer of tetrafluoroethylene and a perfluorovinyl monomer, one of ordinary skill in the art can, absent evidence to the contrary, only assume that every copolymer of that type had the claimed property.

2. Claim 34 is rejected under 35 U.S.C. 102(b) as being clearly anticipated by Sawamoto et al (US 5,290,406).

Sawamoto et al clearly anticipate the invention as claimed. Sawamoto et al teach (see figure, abstract and col. 5, lines 30-60) an assembly including an electrolytic cell divided by a permselective polymer membrane, a metal anode and a metal cathode, and further included gas/liquid separators (i.e.-disengagers) (16, 5) for each of the catholyte and anolyte streams.

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3. Claim 35 is rejected under 35 U.S.C. 103(a) as being unpatentable over Sawamoto et al (US 5,290,406) in view of deNora et al (US 4,381,979).

Sawamoto et al teach that the anode was made from catalytic β -lead dioxide. The lead oxide was specifically used to produce ozone.

However, it would have been obvious to one of ordinary skill in the art to have adapted the assembly to produce other products.

DeNora et al teach (see col. 8, lines 26-61) a platinum group metal oxide coated on a titanium substrate as the anode. This anode has low chlorine over voltage when used to produce chlorine gas.

Therefore, it would have been obvious to one of ordinary skill in the art to have substituted the anode of deNora et al for the anode of Sawamoto et al to adapt the cell of Sawamoto et al for making chlorine gas as taught by deNora et al because the electrocatalytic anode of deNora et al had low chlorine over voltage.

(10) Response to Argument

Appellant has argued that:

- a. Sawamoto et al cannot anticipate claim 34 because it does not produce an alkali metal halate.

In response, Appellant's attention is directed to MPEP 2114 and 2115.

Apparatus claims are defined by the structural limitations of the claims, not by the intended use or function of the invention. In the instant case, the prior art shows the exact claimed structure. There is restriction as to whether or not the preamble is given weight. The claim at issue is an apparatus claim and must be treated within the context

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of apparatus claim interpretations. Appellant has not claimed any structure in claim 34 that is not present within the disclosure of Sawamoto et al.

- b. Claims 8-17 reciting a "low alkali metal ion transport efficiency" is enabled by the specification as filed.

It should be noted that Appellant did not provide an express definition for the term "low alkali metal ion transport efficiency", and has been interpreted by the Examiner to mean the disclosed range of less than 60% transport efficiency.

- i. One of ordinary skill in the art would know of the properties of the commercially available Nafion® permselective membranes.

In response, if this were true, then Appellant could have submitted such data, or directed the Examiner to some resource which contained data related to the alkali metal ion transport efficiency of commercially available polymer membranes, and resolved this issue.

- ii. Appellant's invention is not the composition of the membrane, but the use of such membrane in an electrolytic cell to produce alkali metal halates.

In response, the Examiner has not "confused" the issues as Appellant states. Appellant has failed to disclose even one example of a permselective membrane that had the claimed "low alkali metal ion transport efficiency" of less than 60%. The Examiner has not requested Appellant to show how to make the membrane, merely to provide data showing some examples of membranes that had the claimed property.

iii. As per MPEP 2164.08, the scope of enablement must only bear a reasonable correlation to the scope of the claims.

In response, while that is true, "reasonable correlation" does not mean disclosure of an example that lies outside the claimed range.

iv. It is only reasonable that the scope of the Appellant's claimed invention not be limited to the low alkali metal ion transport efficiency permselective polymer membrane disclosed in Example 10 of the specification, since to do so would leave the field open to others to seek protection for the use of similar membranes having even lower alkali metal ion transport efficiency than the membrane disclosed in Example 10.

In response, the Examiner has not proposed limiting the scope of the claimed invention to only the example disclosed by Appellant. In fact, the claims should be interpreted to mean any permselective polymer membrane having the claimed property. The real issue is that Appellant has failed to disclose a single example of a permselective polymer membrane which meets the claimed property. How can Appellant be entitled to a claim which covers using a membrane having an alkali metal ion transport efficiency of less than 60%, when Appellant has not shown that such a membrane exists. The only example of a membrane disclosed by Appellant occurs in Example 10. It has an alkali metal ion transport efficiency of 65%. Thus, Appellant has failed to disclose any membrane

suitable for use within the claimed apparatus that meets the requirements of the alkali metal ion transport efficiency.

c. With respect to Appellant's affidavit under 37 CFR 1.132, the Examiner does not find Appellant's arguments convincing. Particularly, the disclosure as filed states (on page 14, 1st paragraph) that suitable polymers include copolymers of vinyl monomers such as tetrafluoroethylene and chlorotrifluoroethylene, and a perfluorovinyl monomer having an ion-exchange group or a reactive group which can be converted into an ion-exchange group. Then, in Appellant's affidavit, it is stated that the disclosure in the 1st paragraph on page 14 would have been considered to be "a generic disclosure of a permselective polymer membrane, for instance those sold under the tradename Nafion. Since such membranes for use in electrolytic cells to separate anode and cathode compartments of chlor-alkali cell have high transport efficiency for alkali metal ions on the order of 92-96%, modification of this membrane base to provide the required low alkali metal ion transport efficiency permselective polymer membrane component of the claimed assembly is necessary to provide the desired properties." The disclosure as filed states that certain materials are suitable. However, Appellant states within the 1.132 affidavit that *modification* of those materials was necessary to achieve the claimed properties. Thus, it is clear that Appellant's specification, as filed, failed to enable one of ordinary skill in the art to make a cell with the claimed low alkali metal ion transport efficiency because it does not disclose the need to modify the membrane material to meet

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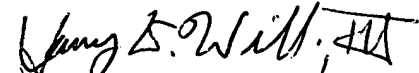
the claimed property. Additionally, the affidavit states that Nafion 551 was an example disclosed within the specification as filed which was made of a perfluorosulfonic acid polymer, but which was modified with Teflon (polytetrafluoroethylene) fibers to have the desired low alkali metal ion transport efficiency. However, as noted above, Nafion 551 does not meet the disclosed range of suitable alkali metal ion transport efficiency.

(11) Related Proceeding(s) Appendix

No decision rendered by a court or the Board is identified by the examiner in the Related Appeals and Interferences section of this examiner's answer.

For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,



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